Pumping Plant for Water Control

PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 533

DEFINITION

A pumping plant for water control is a pumping facility installed to pump water for a conservation need.

PRACTICE INFORMATION

A pumping plant for water control may be installed for a multitude of conservation purposes. This includes but is not limited to removing excess surface or ground water, filling ponds, or pumping to regulate water levels for wetland sites. Pumping plants may also be installed to provide water for irrigation, livestock, and wildlife. This practice is especially applicable when there is a need for a high volume pump to maintain critical water levels is swamps, marches, and constructed wetlands.

Additional information including design criteria and specifications are in the local NRCS Field Office Technical Guide.

The following pages list the conservation effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, and soil. Users are cautioned that these effects are estimates that may or may not apply to a specific site.

CONSERVATION PRACTICE PHYSICAL EFFECT WORKSHEET

NOTE: *recorded in Microsoft word 6.0 - use tabs to change cells/fields*

STATE	Iowa	FIELD OFFICE		DATE	5/15/97

PRACTICE: 533 Pumping Plant for Water Control	NOTES:
RESOURCE: SOIL **RESOURCE CONCERN: EROSION**	**Help Message: Click on form field for choice lists. Tab key to move around. "N/A" is the default.**

RESOURCE INDICATORS	**PHYSICAL EFFECTS**
SHEET AND RILL	N/A
WIND	N/A
EPHEMERAL GULLY	N/A
CLASSIC GULLY	N/A
STREAMBANK	situational concerning streambank erosion
IRRIGATION INDUCED	N/A
SOIL MASS MOVEMENT	N/A
ROADBANK/CONSTRUCTION	N/A
OTHER	
RESOURCE CONCERN: **SOIL CONDITION**	
SOIL TILTH	N/A
SOIL COMPACTION	N/A
SOIL CONTAMINATION	
• SALTS	N/A
• ORGANICS	N/A
• FERTILIZERS	N/A
• PESTICIDES	N/A
• OTHER	
DEPOSITION/DAMAGE	
• ONSITE	N/A
• OFFSITE	N/A
DEPOSITION/SAFETY	
• ONSITE	N/A
• OFFSITE	N/A
OTHER	
RESOURCE: **WATER** RESOURCE CONCERN: **WATER QUANTITY**	
SEEPS	situational regarding seep development
RUNOFF/FLOODING	situational concerning runoff and floods
EXCESS SUBSURFACE WATER	situational concerning excess subsurface H2O
INADEQUATE OUTLETS	moderate improvement in H20 outlet concern
WATER MGT. IRRIGATION	
• SURFACE	situational concerning IWM, surface
• SPRINKLER	situational concerning IWM, sprinkler
WATER MGT. NON-IRRIGATED	situational concerning improved moisture use
RESTRICTED FLOW CAPACITY (H20 convey.)	
• ONSITE	slight improvement in onsite drainage
• OFFSITE	slight improvement in offsite drainage
RESTRICTED STORAGE	situational concerning sedimentation of H2O stor.

RESOURCE: **WATER** RESOURCE CONCERN**: WATER QUALITY**	
RESOURCE INDICATORS	**PHYSICAL EFFECTS**
GROUNDWATER CONTAMINANTS	
• PESTICIDES	N/A
• NUTRIENTS AND ORGANICS	N/A
• SALINITY	N/A
• HEAVY METALS	N/A
• PATHOGENS	N/A
• OTHER	
SURFACE WATER CONTAMINANTS	
• PESTICIDES	N/A
• NUTRIENTS AND ORGANICS	N/A
• SUSPENDED SEDIMENTS	N/A
• LOW DISSOLVED OXYGEN	N/A
• SALINITY	N/A
• HEAVY METALS	N/A
• WATER TEMPERATURE	N/A
• PATHOGENS	N/A
AQUATIC HABITAT SUITABILITY	N/A
OTHER	
RESOURCE: **AIR** RESOURCE CONCERN: **AIR QUALITY**	
AIRBORNE SEDIMENT AND SMOKE PARTICLES	
• ONSITE SAFETY	N/A
• OFFSITE SAFETY	N/A
• ONSITE STRUCT. PROBLEMS	N/A
• OFFSITE STRUCT. PROBLEMS	N/A
• ONSITE HEALTH	N/A
• OFFSITE HEALTH	N/A
AIRBORNE SEDIMENT CAUSING CONVEYANCE PROBLEMS	N/A
AIRBORNE CHEMICAL DRIFT	N/A
AIRBORNE ODORS	N/A
FUNGI, MOLDS, AND POLLEN	N/A
OTHER	
RESOURCE CONCERN: **AIR CONDITION**	
AIR TEMPERATURE	N/A
AIR MOVEMENT (windbreak effect)	N/A
HUMIDITY	N/A
OTHER	

RESOURCE: **PLANT** RESOURCE CONCERN: **SUITABILITY**	
RESOURCE INDICATORS	**PHYSICAL EFFECTS**
SITE ADAPTATION	N/A
PLANT USE	N/A
OTHER	
RESOURCE CONCERN: **CONDITION**	
PRODUCTIVITY	N/A
HEALTH, VIGOR, SURVIVAL	N/A
OTHER	
RESOURCE CONCERN: **MANAGEMENT**	
ESTAB., GROWTH, HARVEST	N/A
NUTRIENT MANAGEMENT	N/A
PESTS	N/A
THREAT/ENDANGERED PLANTS	N/A
OTHER	
RESOURCE: **ANIMAL** RESOURCE CONCERN: **HABITAT**	
FOOD	situational
COVER/SHELTER	situational
WATER (QUANTITY & QUALITY)	situational
OTHER	
RESOURCE CONCERN: **MANAGEMENT**	
POPULATION BALANCE	situational
THREAT/ENDANGERED ANIMALS	situational
HEALTH	situational
OTHER	
RESOURCE: **HUMAN** RESOURCE CONCERNS**: ECONOMIC CONSIDERATIONS**	
PLAN / COST EFFECTIVENESS	situational concerning cost effectiveness
CLIENT FINANCIAL CONDITION	N/A
MARKETS FOR PRODUCTS	N/A
AVAILABLE LABOR	moderate increase in labor requirement
AVAILABLE EQUIPMENT	situational regarding equipment concerns

RESOURCE: **HUMAN** RESOURCE CONCERN: **SOCIAL CONSIDERATIONS**	
RESOURCE INDICATORS	**PHYSICAL EFFECTS**
PUBLIC HEALTH AND SAFETY	insignificant
PRIVATE/PUBLIC VALUES	sign. improvement in private/public values
CLIENT CHARACTERISTICS	N/A
RISK TOLERANCE	N/A
TENURE	N/A
OTHER	
RESOURCE CONCERN: **CULTURAL CONSIDERATIONS**	
ABSENCE/PRESENCE OF CULTURAL RESOURCES	situational regarding cultural resources
SIGNIFICANCE OF CULTURAL RESOURCES	situational regarding cultural resources
MITIGATION OF NEGATIVE CULTURAL RES. IMPACTS	situational regarding cultural resources
OTHER	